

ABSTRACT OF THE DISCLOSURE

A technique for detecting and indicating an internal anatomical obstacle encountered during insertion of a medical device into the body of a patient, comprising an elongated member such as a tube, catheter, guidewire, or other device, having a location indicating element, such as a permanent magnet, flexibly coupled to its distal end, and an external detector that tracks and displays the location and orientation of the location indicating element. The flexible coupling has sufficient stiffness to maintain the orientation of the location indicating element against the forces from both gravity and flowing blood within a patient's vasculature, but allows the location indicating element to change orientation if it encounters an obstacle during insertion. The medical caregiver monitors the detector's display and determines encounters with obstacles by observing changes in the orientation of the location indicating element.

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